

AMENDMENTS TO THE CLAIMS:

Claims 1-22 (Cancelled).

Claim 23 (Previously presented). A photosensing organic field effect transistor (POFET),
comprising:

a substrate insulating layer, the insulating layer having a high relative dielectric constant and a first side and a second side;

a gate electrode, the gate electrode being an electrical conductor, the gate electrode being positioned adjacent to the first side of the insulating layer;

a semiconducting polymer layer, the semiconducting polymer layer being responsive to incident light, the semiconducting polymer layer having a first side, a second side, a first end and a second end, the second side of the semiconductor layer being adjacent the second side of the insulating layer;

a source electrode, the source electrode being an electrical conductor, the source electrode being in electrical contact with the first end of the semiconductor layer;
and

a drain electrode, the drain electrode being an electrical conductor, the drain being in electrical contact with the second end of the semiconducting polymer layer, wherein a POFET saturation current gain of 100 or higher may be achieved.

Claims 24-28 (Cancelled).